

CLAIMS

1. A filter for internal combustion engine liquids, comprising a casing (2) containing a toroidal filter cartridge (3) which separates the casing cavity into two chambers (21, 22) for passage of the liquid to be filtered and  
5 passage of the filtered liquid respectively; a removable cover (4) closing said cavity and comprising the inlet and outlet conduits for the liquid; the region of the cover facing the casing being connected to the facing end of the cartridge by a snap connection system comprising two complementary parts (10, 111) which are associated with the cover and with the cartridge  
10 respectively, and can be connected together by axially sliding said cartridge, characterised in that that part (10) of the system associated with the cartridge is located within the central compartment of this latter, and that part (111) of the system associated with the cover is dimensioned and shaped to be able to be inserted into the preceding and coupled thereto,  
15 where it retains the facing end of the cartridge in the immediate vicinity of the cover.
2. A filter as claimed in claim 1, characterised in that that system part (10) installed on the cartridge consists of an annular body (100), a part of which is inserted into said central compartment, where it provides the  
20 engagement seat for that system part (111) installed on the cover.
3. A filter as claimed in claim 2, characterised in that said engagement seat comprises a circumferential series of equidistant recesses (104) which are provided along the free edge of said annular body part inserted into said central compartment.
- 25 4. A filter as claimed in claim 3, characterised in that each portion of the annular body (100) between two recesses (104) comprise a depressed

curved transverse surface (106) provided on the inner cylindrical surface of the annular body and having its centre of curvature outside the longitudinal axis thereof so as to present a depth which, starting from a side of the respective recess, decreases until it becomes zero before reaching the next recess.

5      5.      A filter as claimed in claim 4, characterised in that beyond the zero-depth end of said depressed curved surface and spaced from it, the annular body presents an internal abutment (105) which defines said predetermined angle for releasing the cartridge.

10      6.      A filter as claimed in claim 1, characterised in that that system part (111) installed on the cover comprises a projecting sleeve which is intended to be inserted practically as an exact fit into said annular body, and from the free end of which there branch a number of longitudinal tangs (112) equal to the number of recesses (104) of said annular body,  
15      each tang being provided with an outer terminal tooth (113) to engage the bottom edge of the respective recess.

7.      A filter as claimed in claim 1, characterised in that a sealing engagement device is interposed between said complementary constituent parts of said snap connection system.

20      8.      A filter as claimed in claim 7, characterised in that said sealing engagement device comprises an annular gasket located in an outer circumferential groove provided on a part of the annular body which extends beyond the cartridge, and faces an enclosing skirt carried by the cover.

25      9.      A filter as claimed in claim 8, characterised in that said skirt is dimensioned to act as a limit stop during the engagement of the snap

connection system.